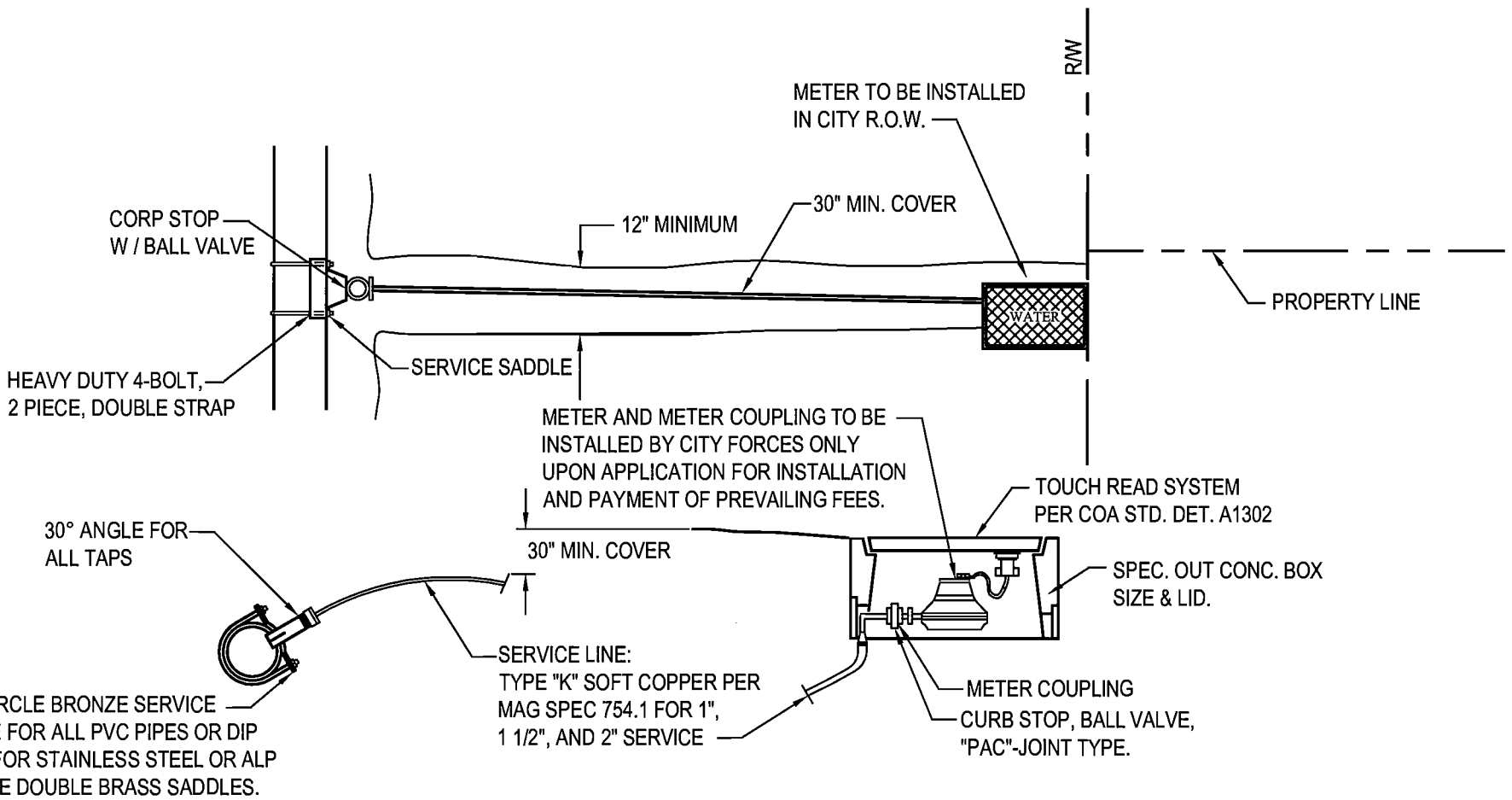
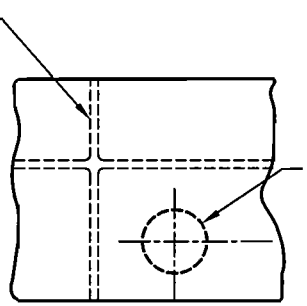


NOTES:

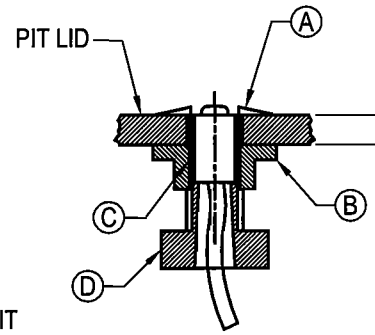
1. ALL TAPS MUST BE MADE USING A SERVICE SADDLE.
2. ALL SERVICE LINES SHALL HAVE THE PACK-JOINT COMPRESSION FITTINGS FOR CORP STOPS AND METER STOPS
3. WHERE A CONTRACTOR IS INSTALLING NEW WATER LINES, HE SHALL ALSO INSTALL THE WATER SERVICE CONNECTION. THE INSTALLATION SHALL INCLUDE THE SERVICE SADDLE, CORP STOP, SERVICE PIPE, APPURTENANT FITTINGS, METER STOP, CONCRETE METER BOX AND BOX COVER, PER MAG SPECIFICATIONS
4. COPPER SERVICE LINES IN THE 1", 1 1/2", AND 2" SIZES THAT CROSS STREETS WILL BE ONE CONTINUOUS PIECE. NO JOINTS IN STREET OR UNDER CONCRETE
5. CONTRACTOR SHALL PROVIDE TAPPING SERVICE; NOT SUPPLIED BY CITY.

DETAIL NO.			
A1300	**CITY OF AVONDALE STANDARD DETAIL**	**WATER SERVICE CONNECTION**	APPROVED BY: Daniel W. Fitzhugh DATE: 04-07-08



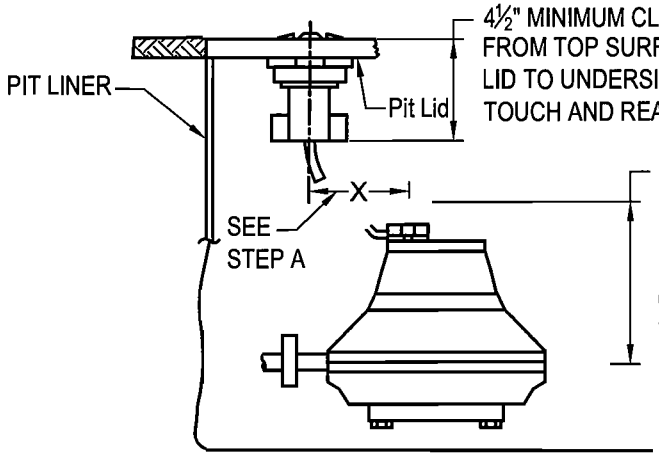
NOTE: THE CENTER OF THE HOLE MUST BE AT LEAST 1" FROM UNDERNEATH RIBS UNLESS THE RIB SPACING ALLOWS THE NUT TO TIGHTEN AGAINST THE OPEN SIDE OF MORE THAN ONE RIB

LOOKING DOWN ON TYPICAL METER PIT LID



NOTE: NUT CAN BE INSTALLED EITHER WAY. DEPENDING ON PROXIMITY OF RIBBING.

INSTALLATION DETAILS OF TOUCH READ DEVICE



SIDE VIEW OF TYPICAL METER PIT INSTALLATION

INSTALLATION INSTRUCTIONS

STEP A: LOCATING AND DRILLING HOLE-
DRILL 1-¾" DIA. HOLE THROUGH PIT LID-CLEARING UNDERSIDE RIBBING.

1. WHEN LOCATING THE HOLE, DETERMINE THE REQUIRED VERTICAL CLEARANCE TO AVOID INTERFERENCE OF THE TOUCH READ DEVICE AND THE METER (DIM. X)
2. THE HOLE CENTER MUST BE 2-½" MINIMUM FROM THE OUTSIDE EDGE OF THE PIT LID FOR CLEARANCE OF THE DEVICES TOP FLANGE. SEE THE NOTE ON RIB CLEARANCE

STEP B: INSTALLING DEVICE -

1. INSERT SENSOR HOUSING (A) THROUGH PIT LID HOLE (FROM ABOVE) AND TIGHTEN SECURELY IN PLACE WITH PLASTIC NUT (B)
2. INSERT SENSOR ASSEMBLY (C) -CONNECTED TO METER'S REGISTER - INTO HOUSING AND SECURE IN PLACE WITH SCREW PLUG (D).
3. EXCESS WIRE SHOULD BE COILED LOOSELY (NOT TIED) IN METER PIT, ALLOWING SLACK FOR PIT LID REMOVAL

SR METERS	
METER SIZE	DIA "A"
5/8"	4-1/2"
5/8"	5"
5/8"	5-1/2"
5/8"	6-1/2"
5/8"	7"

SR II METERS	
METER SIZE	DIA "A"
5/8"	5-1/2"
3/4"	5-1/2"
1"	6"

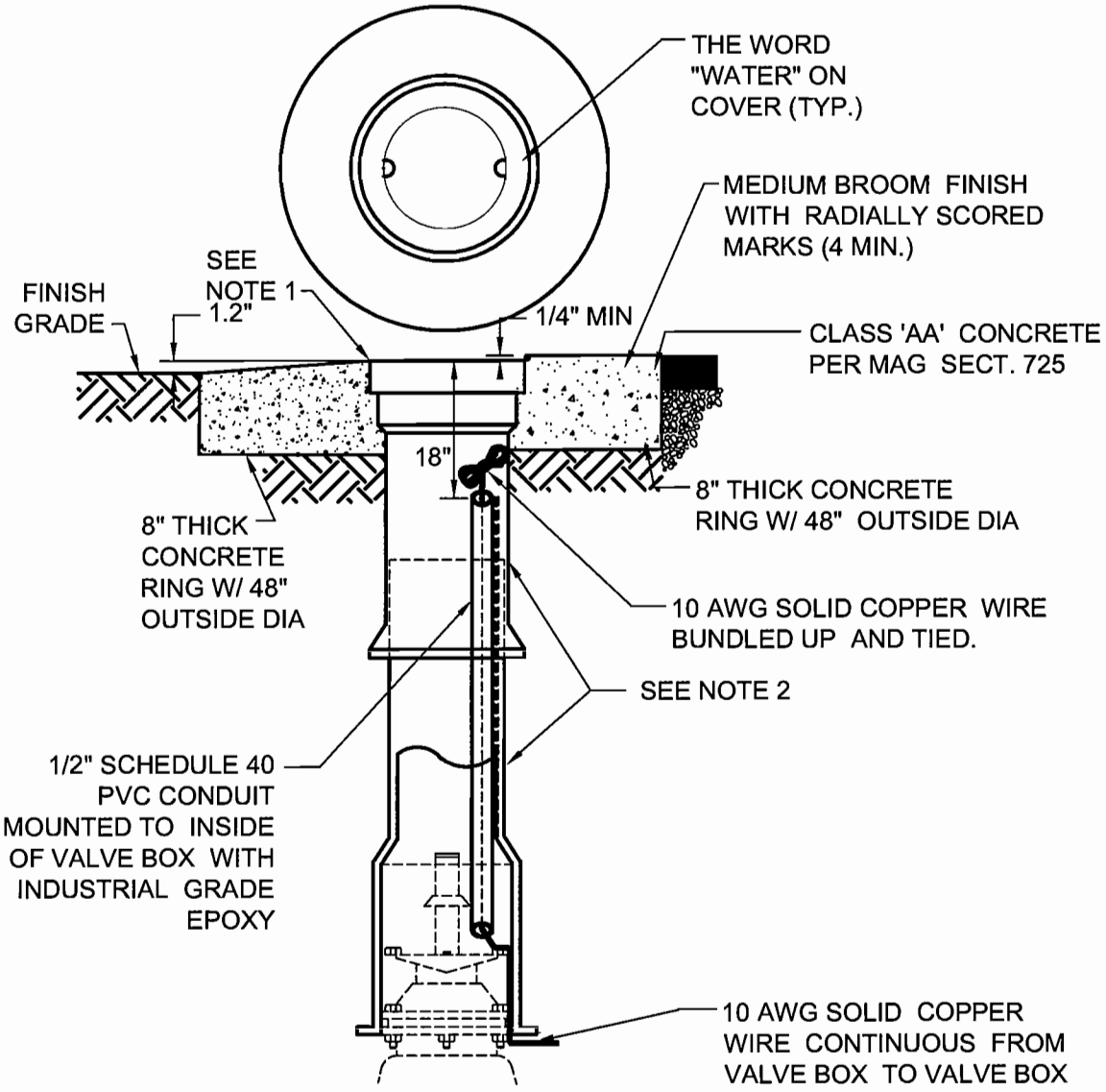
ITRON
RADIO READ
TOUCH READ SYSTEM
PIT LID DEVICE INSTALLATION
DIMENSIONS & INSTRUCTIONS
UM-80430D

DETAIL NO.
A1302

CITY OF AVONDALE
STANDARD DETAIL

WATER METER TOUCH READ SYSTEM

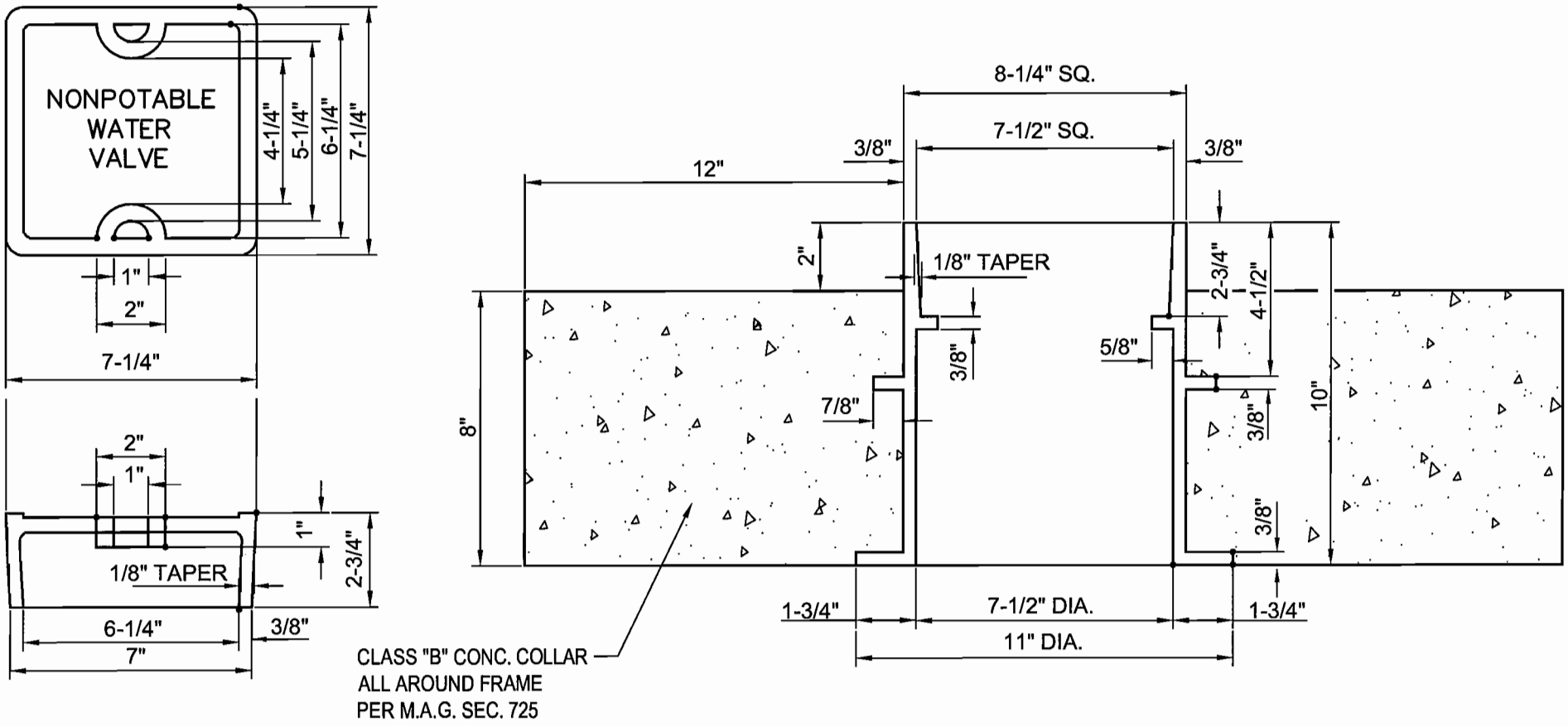
APPROVED BY: Daniel W. Fitzhugh
DATE: 04-07-08



NOTES:

1. VALVE BOX SHALL BE ADJUSTED TO THE FINISHED GRADE PRIOR TO PLACING OF THE PORTLAND CEMENT CONCRETE SURFACE.
2. USE PARKSON TYLER, APCO OR EQUAL DEEP SKIRTED LID (4" OR MORE) TYPE, SLIDING ADJUSTABLE CAST IRON VALVE BOX C.I. MIN. T.S. 30,000 P.S.I.
3. GROUND BELOW CONCRETE PAD OR 3 BRICKS TO BE COMPACTED 95% OF MAX. DENSITY
4. THE ACCEPTABLE SURFACE PROFILE FROM THE PAVEMENT SURFACE ACROSS THE VALVE BOX SHALL NOT VARY MORE 1/4" FROM THE LOWER EDGE OF A 12 FOOT THAN STRAIGHTEDGE WHEN THE STRAIGHTEDGE IS PLACED PARALLEL AND PERPENDICULAR TO THE CENTERLIINE OF THE ROADWAY.
5. CLEAN OUTS AND GAS VALVE ADJUSTMENTS ARE TO BE MADE IN THE SAME MANNER AS WATER VALVE ADJUSTMENTS.

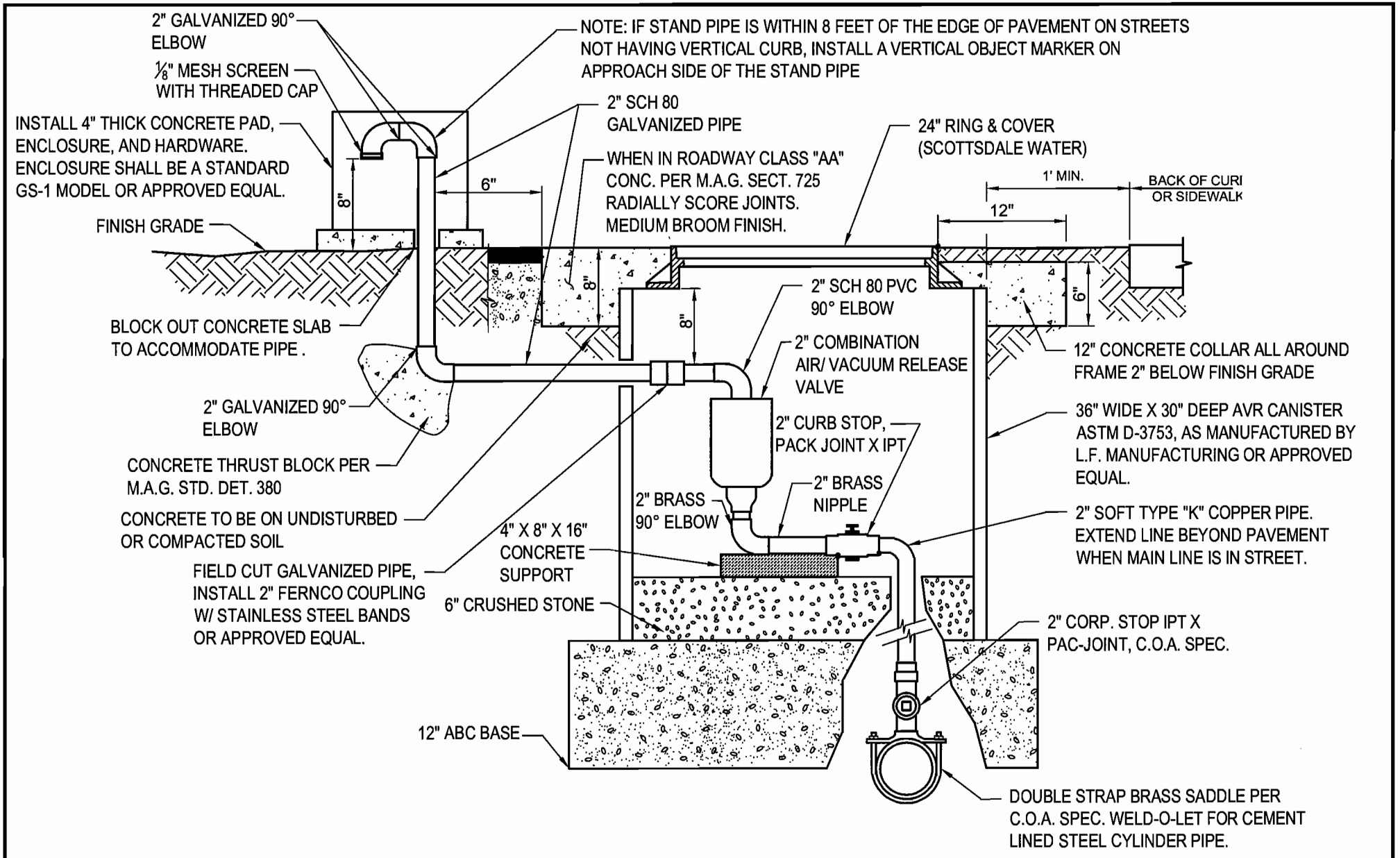
DETAIL NO.			
A1310	**CITY OF AVONDALE STANDARD DETAIL**	**VALVE BOX INSTALLATION AND GRADE ADJUSTMENT**	APPROVED BY: Daniel W. Fitzhugh DATE: 04-07-08



NOTES:

1. ROUND BOTTOM FOR RISER PIPE, SQUARE TOP FOR COVER.
2. ALL MATERIALS SHALL BE CAST IRON PER ASTM A48, CLASS 30B.
3. NONPOTABLE WATER VALVE BOX TO BE INSTALLED PER M.A.G. STD. DETAIL 391.
4. THE CAST IRON LID SHALL BE MARKED "NONPOTABLE WATER VALVE" ON THE TOP SIDE. LETTERS SHALL BE 1" EACH AND RAISED 1/8".

DETAIL NO.			
A1315	**CITY OF AVONDALE STANDARD DETAIL**	**NONPOTABLE WATER VALVE BOX & COVER**	APPROVED BY: Daniel W. Fitzhugh DATE: 04-07-08



DETAIL NO.

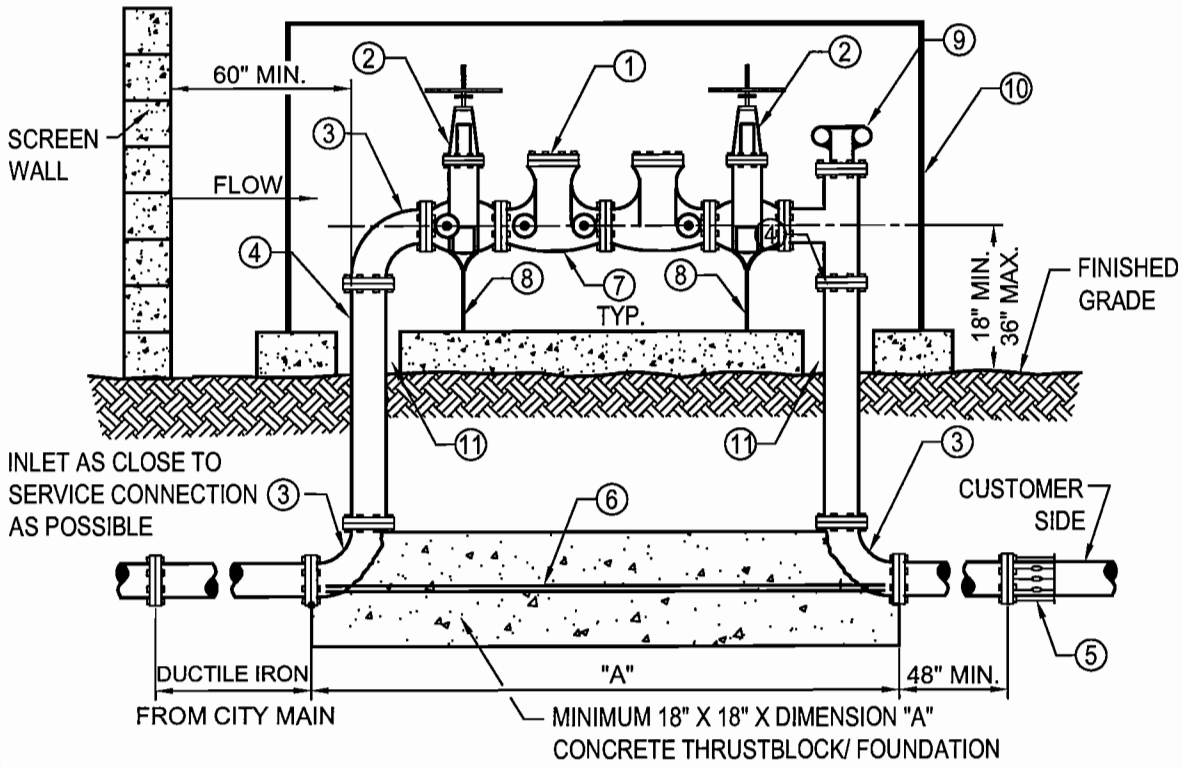
A1320

CITY OF AVONDALE STANDARD DETAIL

AIR RELEASE VALVE

APPROVED BY: Daniel W. Fitzhugh

DATE: 04-07-08



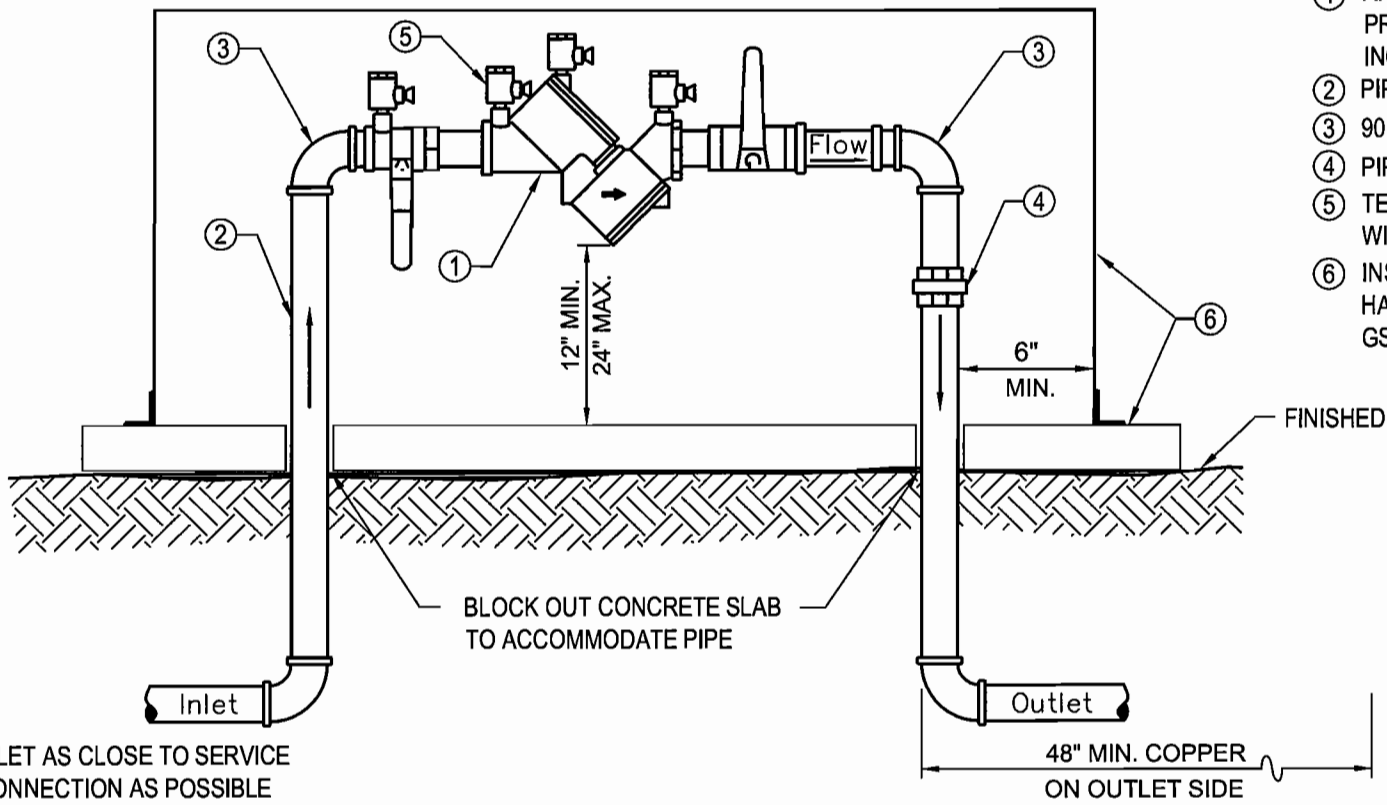
LIST OF MATERIALS

1. APPROVED DOUBLE CHECK VALVE BACKFLOW PREVENTION ASSEMBLY.
2. RESILIENT SEATED O.S. & Y GATE VALVE.
3. 90° ELL. FLANGED D.I.P. 4" THRU 10"
4. PIPE SPOOL. FLANGED D.I.P. 4" THRU 10"
5. FLANGED ADAPTER (WHEN REQUIRED)
6. 3/4" ZINC COATED THREADED ROD, BOLT TO FLANGES AS SHOWN, TYPICAL BOTH SIDES
7. TEST COCKS WITH BRASS PLUGS OR ADAPTERS WITH CAPS INSTALLED (4 REQUIRED)
8. ADJUSTABLE INDUSTRIAL GRADE METAL PIPE SUPPORTS (PER CITY APPROVAL), AND HARDWARE, MOUNTED TO CONCRETE SLAB.
9. FIRE DEPARTMENT CONNECTION CONSISTING OF TWO 2.5" FEMALE INLETS WITH NATIONAL STANDARD FIRE THREAD, BREAKAWAY COVERS, AND CHECK VALVE.
10. INSTALL 6" THICK CONCRETE PAD, ENCLOSURE, AND HARDWARE. ENCLOSURE SHALL BE A GUARD SHACK GS-8 MODEL OR APPROVED EQUAL.
11. BLOCK OUT CONCRETE SLAB TO ACCOMMODATE PIPE AND FLANGE DIAMETER.

NOTES:

1. CONTACT THE CITY OF AVONDALE WATER RESOURCES DEPARTMENT FOR LATEST LIST OF APPROVED BACKFLOW PREVENTION ASSEMBLIES OR CERTIFIED TESTERS.
2. BACKFLOW PREVENTERS MUST BE TESTED BY A CERTIFIED TESTER BEFORE FINAL APPROVAL IS ISSUED.
3. BACKFLOW PREVENTERS SHALL BE PAINTED LIGHT TAN OR A COLOR TO MATCH THE BUILDING OR SCREEN WALL. FIRE DEPARTMENT CONNECTION SHALL BE PAINTED RED. DO NOT PAINT THE NAME PLATE OR ANY BRASS PARTS ON THE ASSEMBLY.
4. SCREENING WALL, GUARD POSTS (IF REQUIRED BY FIRE DEPARTMENT) AND LANDSCAPING MATERIALS SHALL MAINTAIN A MINIMUM 36 INCH CLEARANCE FROM THE ASSEMBLY.
5. FINISHED GRADE UNDERNEATH THE BACKFLOW PREVENTER SHALL BE AT 95% COMPACTION.
6. CALL CITY OF AVONDALE ENGINEERING DEPARTMENT A MINIMUM OF 24-HOURS IN ADVANCE FOR UNDERGROUND INSPECTION BEFORE BACK FILLING TRENCH.
7. TAMPER SWITCHES ON EACH VALVE TIED TO THE BUILDING FIRE ALARM SYSTEM SHALL BE IN ACCORDANCE WITH FIRE DEPARTMENT POLICY.
8. DETECTABLE MARKING TAPE TO BE APPROVED BY THE CITY OF AVONDALE FIRE DEPARTMENT TO BE PLACED ALONG THE FULL LENGTH OF THE FIRE LINE ON THE CUSTOMER SIDE FROM THE BACKFLOW/FIRE DEPARTMENT CONNECTION ASSEMBLY TO THE BUILDING IS REQUIRED.
9. BACKFLOW PREVENTION/FIRE DEPARTMENT CONNECTION ASSEMBLY SHALL BE LOCATED WITHIN 150 FEET OF A FIRE HYDRANT THAT IS ATTACHED DIRECTLY TO A CITY MAIN.
10. IDENTIFICATION TAGS OR SIGNS IDENTIFYING THE OCCUPANCY OR OCCUPANCIES SERVED BY THE ASSEMBLY MAY BE REQUIRED AT THE DISCRETION OF THE FIRE DEPARTMENT.

DETAIL NO.			
A1325	**CITY OF AVONDALE STANDARD DETAIL**	**FIRE PROTECTION DOUBLE CHECK VALVE BACKFLOW PREVENTION ASSEMBLY 4 INCHES THRU 12 INCHES**	APPROVED BY: Daniel W. Fitzhugh DATE: 04-07-08



INLET AS CLOSE TO SERVICE CONNECTION AS POSSIBLE (IMMEDIATELY AFTER WATER METER). COPPER ON INLET SIDE

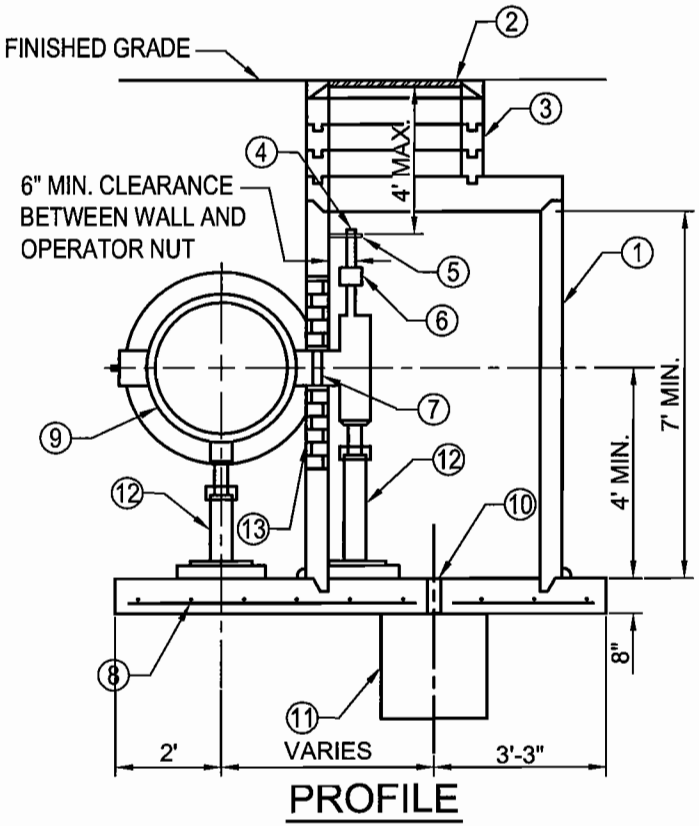
LIST OF MATERIALS

1. APPROVED DOUBLE CHECK VALVE BACKFLOW PREVENTION ASSEMBLY, BALL VALVES INCLUDED.
2. PIPE SPOOL, TYPE "L" HARD COPPER, 3/4" THRU 2 1/2".
3. 90° ELL, COPPER, 3/4" THRU 2 1/2".
4. PIPE UNION, BRASS OR COPPER.
5. TEST COCKS WITH BRASS PLUGS OR ADAPTORS WITH CAPS INSTALLED. (4 REQUIRED)
6. INSTALL 4" CONCRETE PAD, ENCLOSURE, AND HARDWARE. ENCLOSURE SHALL BE "GAURDSHACK, GS-M1" OR APPROVED EQUAL.

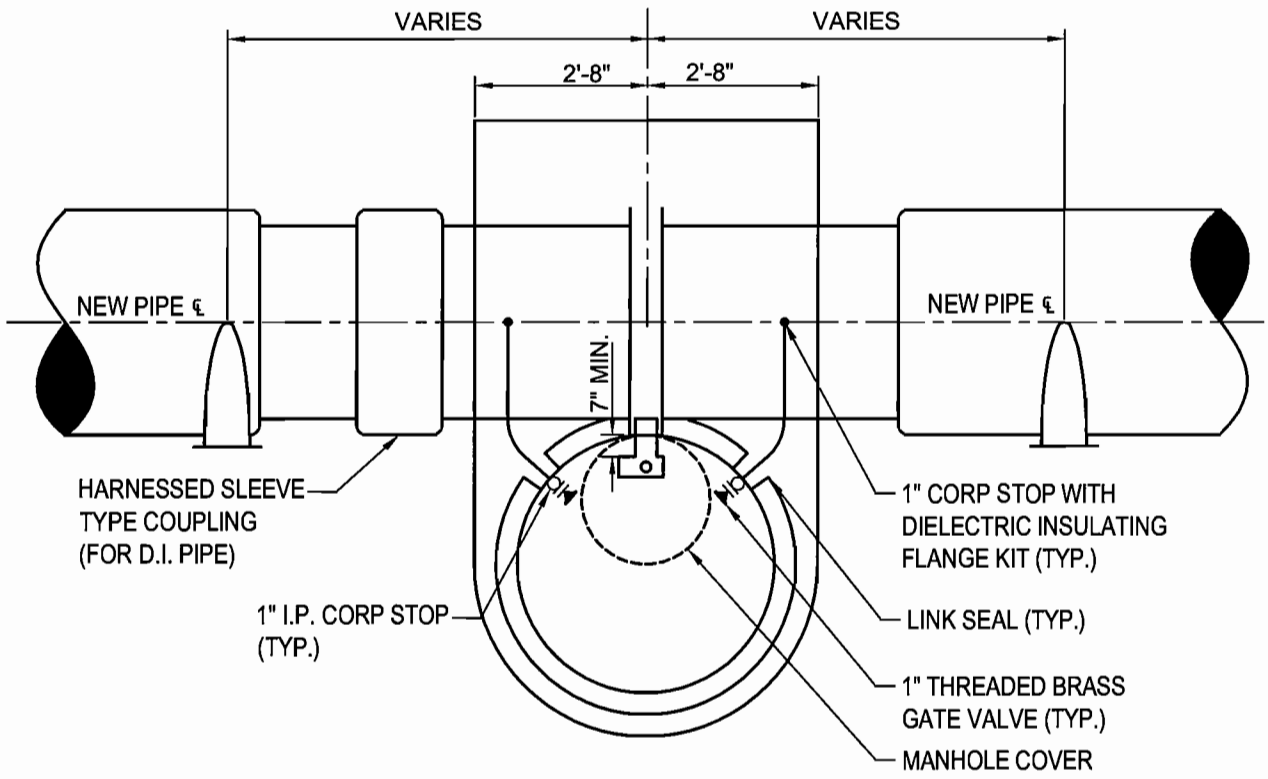
NOTES:

1. BACKFLOW ASSEMBLIES MUST BE TESTED BY A CERTIFIED TESTER THAT IS RECOGNIZED BY THE CITY OF AVONDALE.
2. COPPER FITTINGS SHALL BE CONNECTED WITH LEAD FREE SOLDER JOINTS.
3. FINISHED GRADE UNDERNEATH THE BACKFLOW PREVENTER SHALL BE AT 95% COMPACTION.
4. ALL NIPPLES TO BE COPPER OR BRASS.
5. PIPING UNDER THE CITY RIGHT OF WAY MUST BE TYPE "K" COPPER.
6. CALL FOR UNDERGROUND INSPECTION BEFORE BACKFILLING TRENCH.
7. VERTICAL INSTALLATIONS OF ASSEMBLIES ON FIRE SPRINKLER SYSTEMS ARE ALLOWED USING ASSEMBLIES APPROVED FOR USE IN THE VERTICAL POSITION ON FIRE SYSTEMS.
8. APPROVALS FOR BACKFLOW ASSEMBLIES MUST HAVE SEAL APPROVAL FROM THE AMERICAN SOCIETY OF SANITATION ENGINEERS. BACKFLOW ASSEMBLIES INSTALLED ON FIRE SUPRESSION SYSTEMS MUST ALSO HAVE APPROVAL FROM UNDERWRITERS LABORATORIES AND/OR FACTORY MUTUAL RESEARCH CORPORATION.

DETAIL NO.			
A1326	**CITY OF AVONDALE STANDARD DETAIL**	**DOUBLE CHECK VALVE BACKFLOW PREVENTION ASSEMBLY FOR ASSEMBLIES 3/4 INCH THRU 2-1/2 INCHES**	APPROVED BY: Daniel W. Fitzhugh DATE: 04-07-08



PROFILE



PLAN VIEW

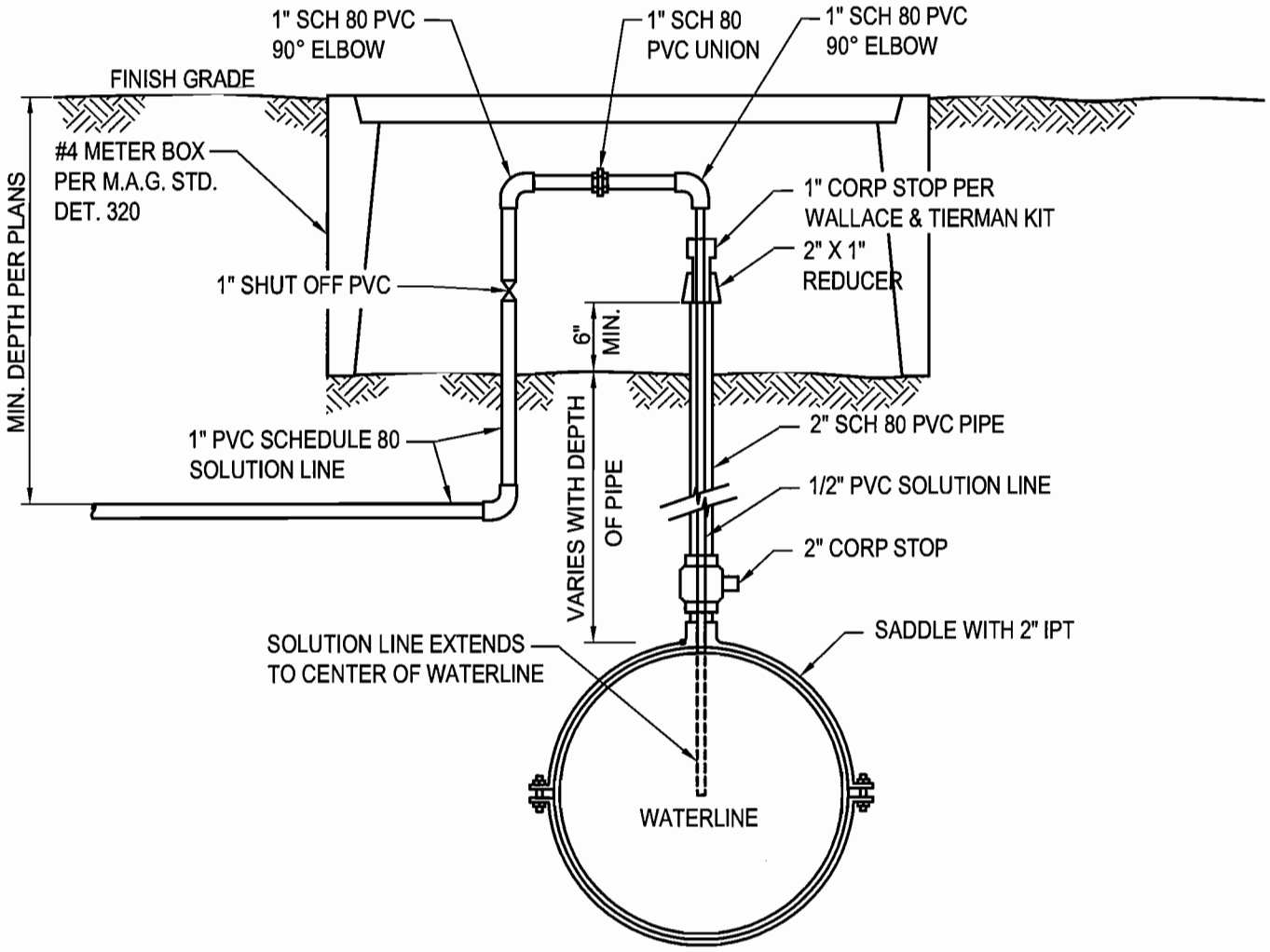
1. 48" I.D. MANHOLE SHAFT PER MAG STD. DETAIL 420, TYPE "B" TOP
2. 30" MANHOLE FRAME & COVER PER MAG STD. DETAIL 424
3. GROUTED ADJUSTING RINGS
4. OPERATOR NUT
5. WALL BRACKET
6. PACKING GLAND
7. 6" EXTENSION
8. #4 REBAR 12" ON CENTER EACH WAY 2" CLEAR TYPICAL
9. BUTTERFLY VALVE
10. 3" DIAMETER DRAIN
11. 8 CU. FT. GRAVEL SUMP
12. ADJUSTABLE PIPE SADDLE SUPPORT
13. RECTANGULAR CUT-OUT IN MANHOLE SHAFT, FILL SPACE BETWEEN SHAFT AND PIPE WITH 1" SHEET FOAM, BRICK AND MORTAR

DETAIL NO.
A1330

CITY OF AVONDALE
STANDARD DETAIL

BUTTERFLY VALVE OPERATOR MANHOLE

APPROVED BY: Daniel W. Fitzhugh
DATE: 04-07-08



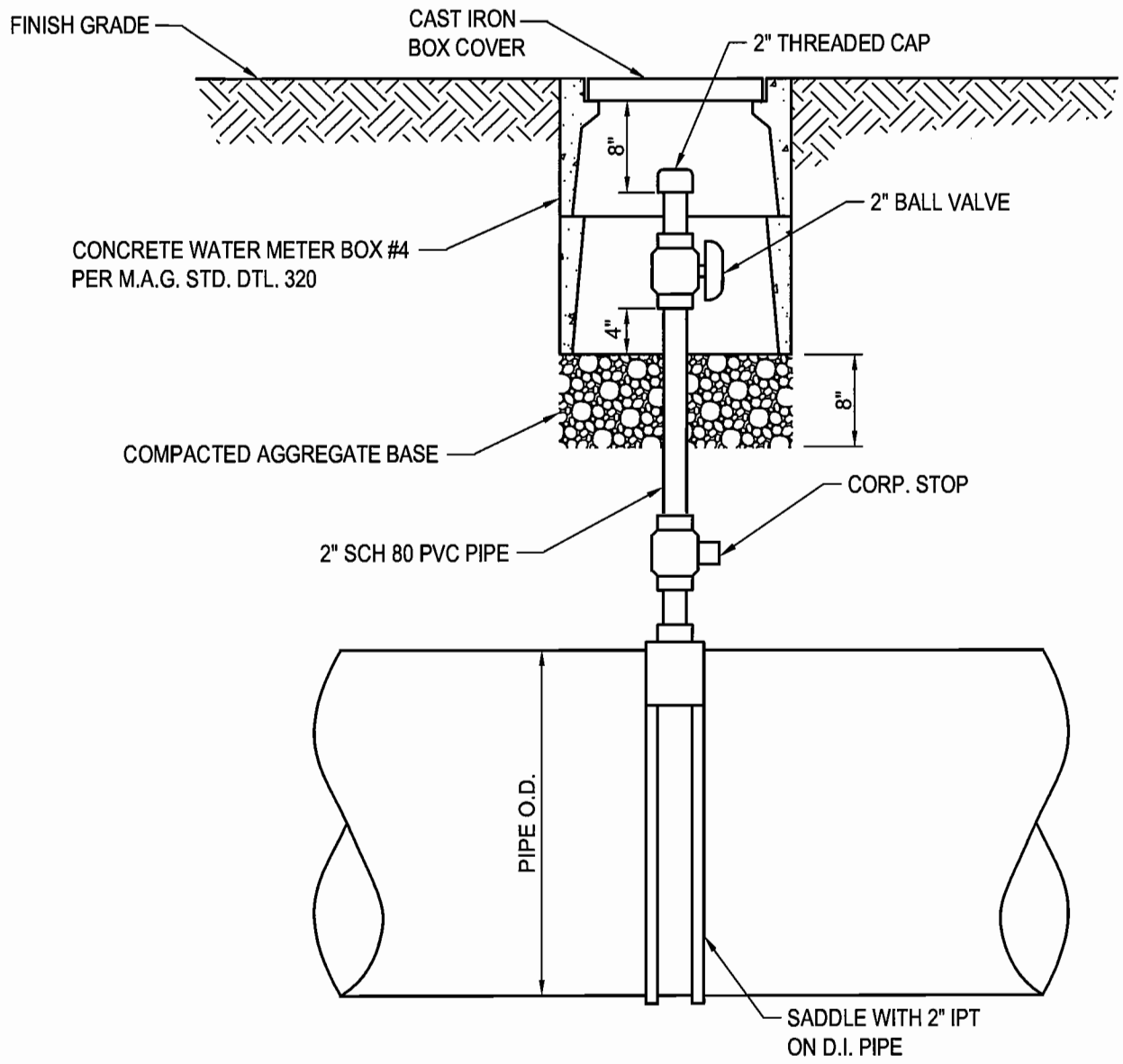
NOTE:
SPECIFICATION ON ALL FITTINGS SHALL EXCEED THE MAXIMUM PRESSURES OF THE SYSTEM.

DETAIL NO.
A1340

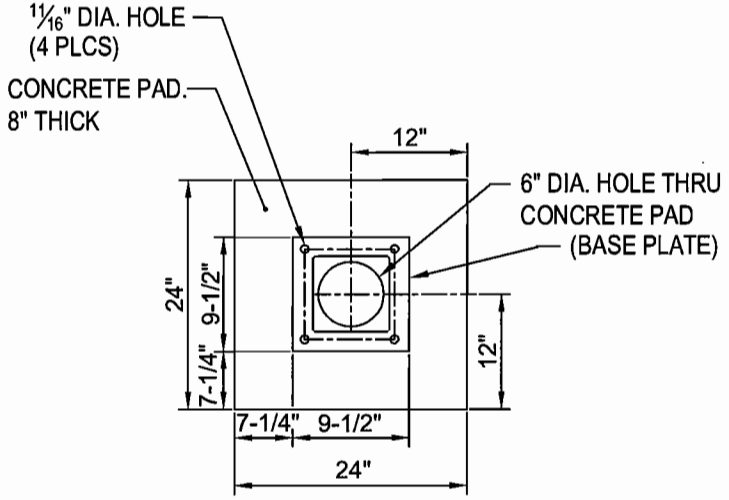
CITY OF AVONDALE
STANDARD DETAIL

CHLORINE INJECTION TAP

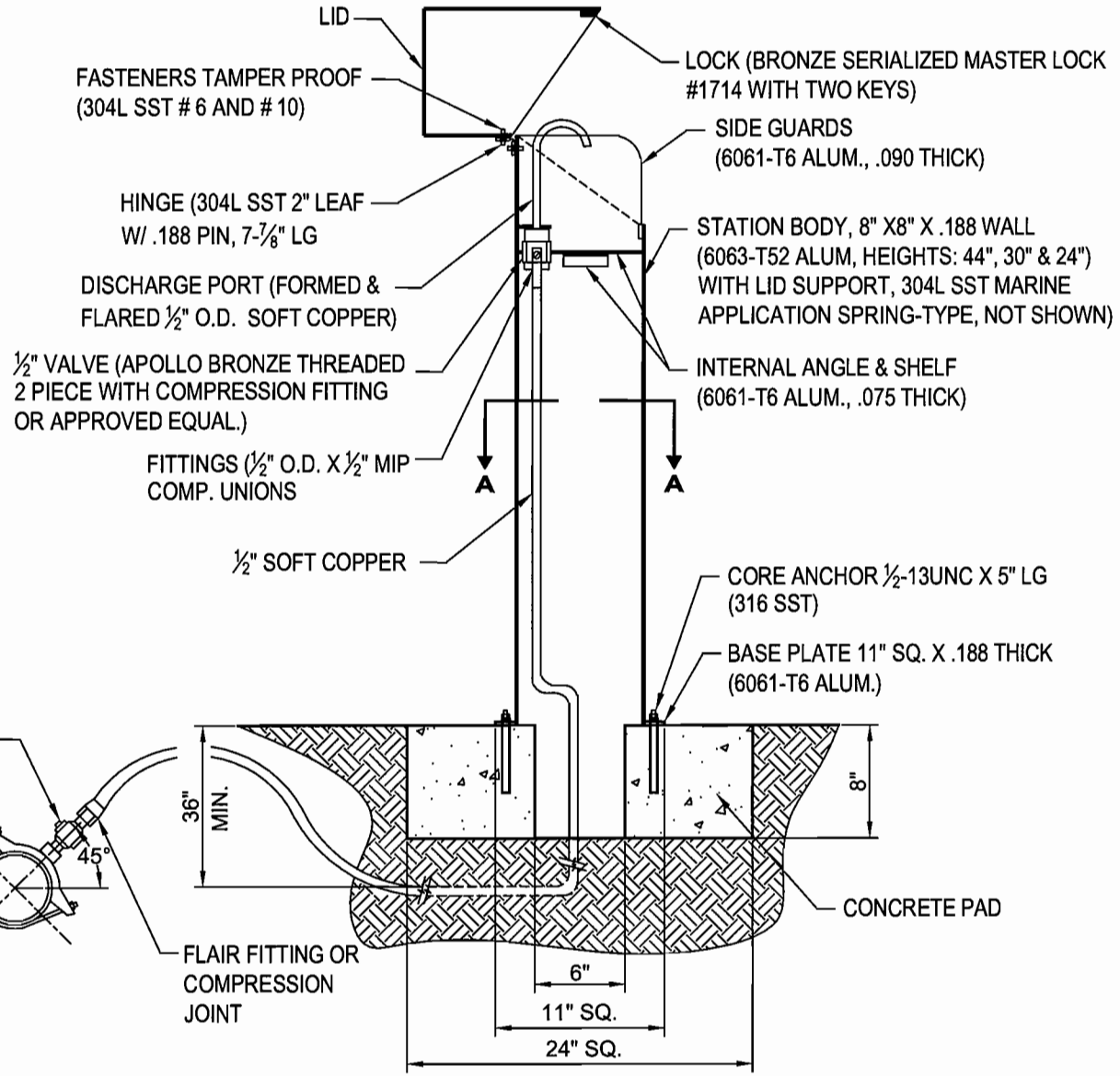
APPROVED BY: Daniel W. Fitzhugh
DATE: 04-07-08



DETAIL NO.			
A1341	**CITY OF AVONDALE STANDARD DETAIL**	**TAP FOR FUTURE CHLORINE INJECTION**	APPROVED BY: Daniel W. Fitzhugh DATE: 04-07-08

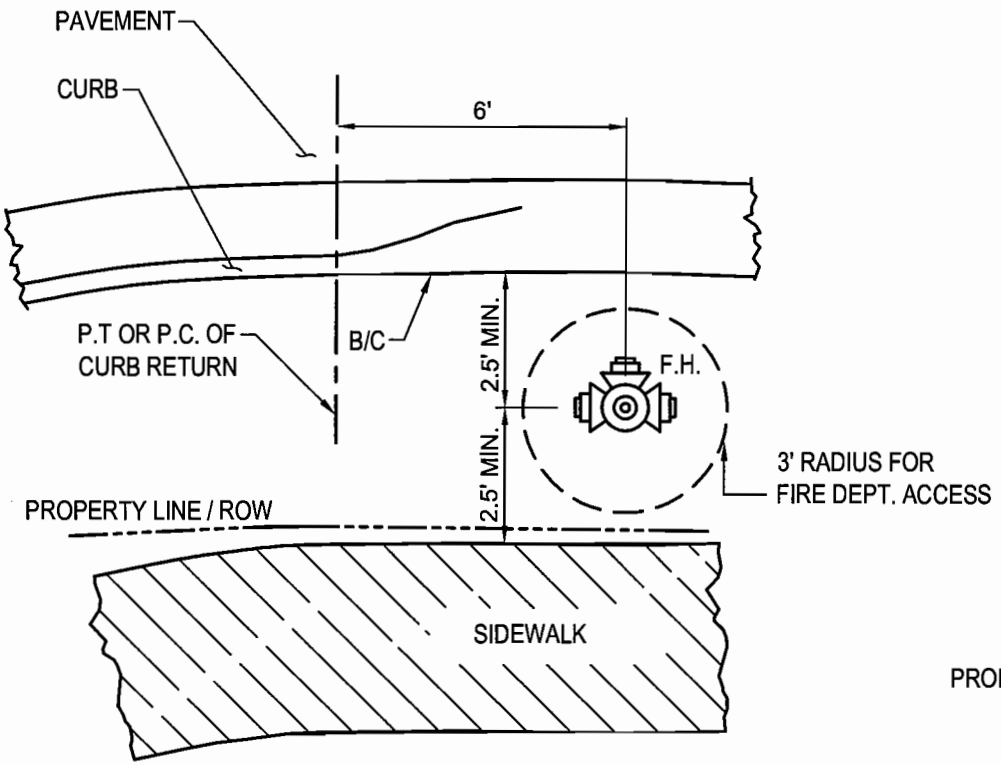


SECTION "A-A"

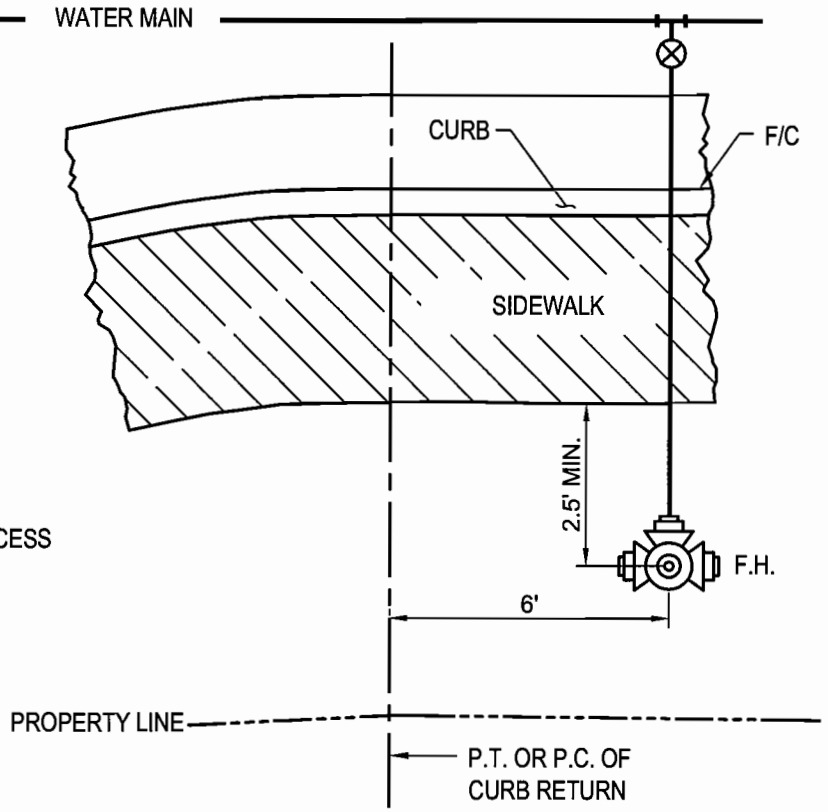


PROFILE

DETAIL NO.			
A1345	CITY OF AVONDALE STANDARD DETAIL	WATER QUALITY SAMPLING STATION	APPROVED BY: Daniel W. Fairbanks DATE: 04-07-08



PARKWAY AREA

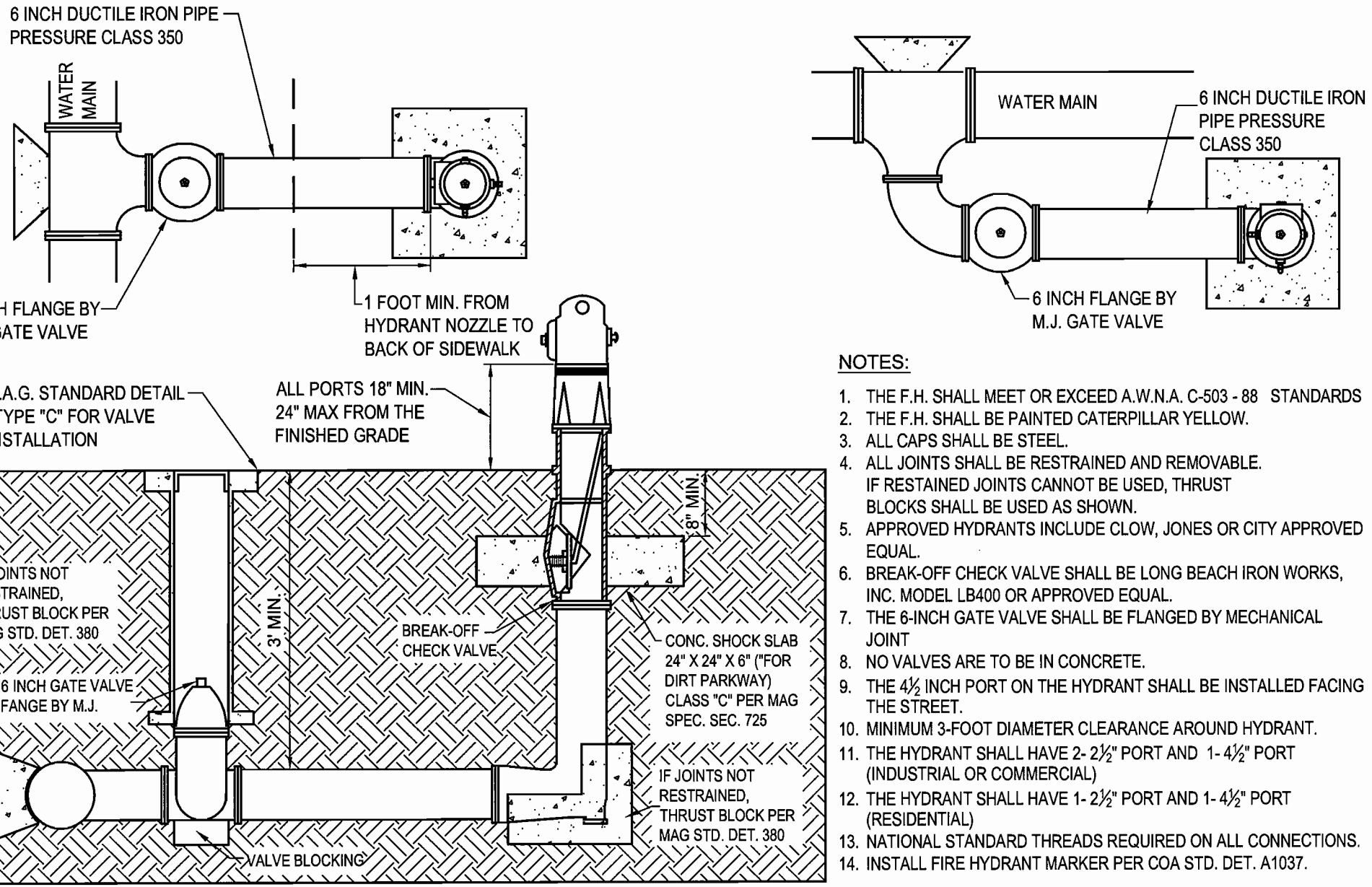


AREA WITH SIDEWALK

NOTES:

1. OBSTRUCTIONS SUCH AS UTILITY POLES, STREET SIGNS, IRRIGATION BOXES, FENCES, ETC., MUST NOT BE PLACED BETWEEN CURB AND HYDRANT.
2. DIMENSIONS SHOWN ON CONSTRUCTION DRAWINGS SUPERSEDE LOCATIONS SHOWN HERE.
3. ON LOCATIONS IN MIDBLOCK, THE FIRE HYDRANT WILL BE ALIGNED WITH A PROPERTY LINE AND 6' MINIMUM FROM DRIVEWAYS.
4. ALL FIRE HYDRANTS INSTALLED PER STANDARD DETAIL A1361 WILL BE LOCATED IN ACCORDANCE WITH THIS DETAIL.
5. IN INDUSTRIAL/COMMERCIAL ZONES A MINIMUM OF 6' FROM DRIVEWAYS MUST BE MAINTAINED WITH VALVE INSTALLED AWAY FROM DRIVEWAY.
6. BOTTOM FLANGE OF FIRE HYDRANT TO BE 2" ABOVE SIDEWALK.

DETAIL NO.			
A1360	**CITY OF AVONDALE STANDARD DETAIL**	**LOCATIONS FOR NEW FIRE HYDRANT**	APPROVED BY: David W. Fitzhugh DATE: 04-07-08



NOTES:

1. THE F.H. SHALL MEET OR EXCEED A.W.N.A. C-503 - 88 STANDARDS
2. THE F.H. SHALL BE PAINTED CATERPILLAR YELLOW.
3. ALL CAPS SHALL BE STEEL.
4. ALL JOINTS SHALL BE RESTRAINED AND REMOVABLE. IF RESTAINED JOINTS CANNOT BE USED, THRUST BLOCKS SHALL BE USED AS SHOWN.
5. APPROVED HYDRANTS INCLUDE CLOW, JONES OR CITY APPROVED EQUAL.
6. BREAK-OFF CHECK VALVE SHALL BE LONG BEACH IRON WORKS, INC. MODEL LB400 OR APPROVED EQUAL.
7. THE 6-INCH GATE VALVE SHALL BE FLANGED BY MECHANICAL JOINT
8. NO VALVES ARE TO BE IN CONCRETE.
9. THE 4½ INCH PORT ON THE HYDRANT SHALL BE INSTALLED FACING THE STREET.
10. MINIMUM 3-FOOT DIAMETER CLEARANCE AROUND HYDRANT.
11. THE HYDRANT SHALL HAVE 2- 2½" PORT AND 1- 4½" PORT (INDUSTRIAL OR COMMERCIAL)
12. THE HYDRANT SHALL HAVE 1- 2½" PORT AND 1- 4½" PORT (RESIDENTIAL)
13. NATIONAL STANDARD THREADS REQUIRED ON ALL CONNECTIONS.
14. INSTALL FIRE HYDRANT MARKER PER COA STD. DET. A1037.

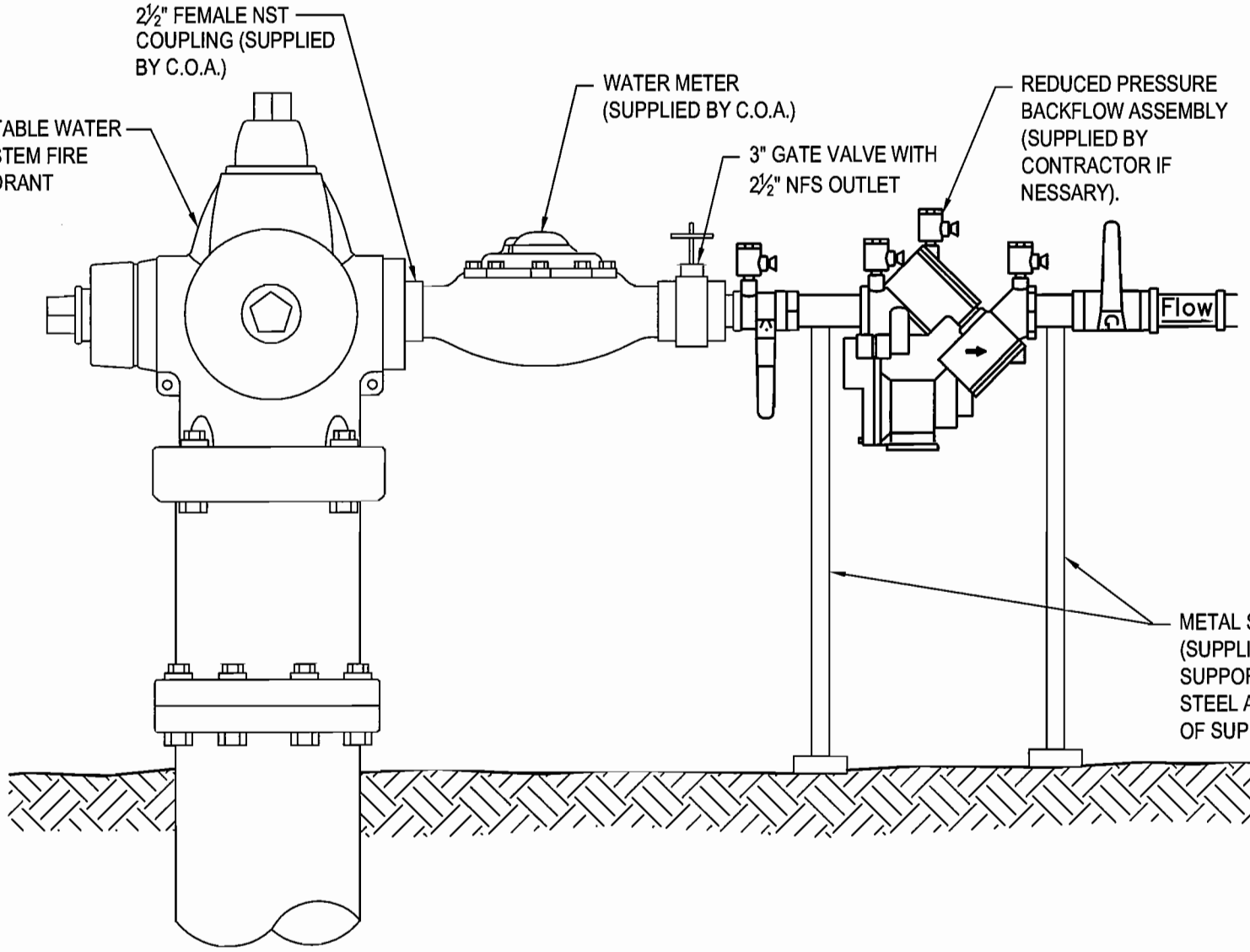
DETAIL NO.

A1361

CITY OF AVONDALE
STANDARD DETAIL

WET BARREL HYDRANT

APPROVED BY: Daniel W. Fitzhugh
DATE: 04-07-08



NOTES:

1. BACKFLOW ASSEMBLY SHALL BE TESTED BY A CERTIFIED BACKFLOW ASSEMBLY TESTER BEFORE USING AND ALSO EACH TIME THE METER IS MOVED.
2. USER MUST REMOVE BACKFLOW ASSEMBLY WHEN HYDRANT METER IS REMOVED OR RELOCATED.
3. USER IS LIABLE FOR ANY DAMAGE TO THE HYDRANT AND ALL ATTACHMENTS TO THE HYDRANT.
4. USER MUST USE GATE VALVE TO CONTROL FLOW OF WATER, NOT THE HYDRANT VALVE ASSEMBLY.
5. CALL 623-333-4400 FOR QUESTIONS.

DETAIL NO.			
A1390	**CITY OF AVONDALE STANDARD DETAIL**	**TEMPORARY WATER SUPPLY HYDRANT METER ASSEMBLY**	APPROVED BY: Daniel W. Fitzhugh DATE: 04-07-08